

VALLANDER. S. V.

SSSR/Physics - Hydrodynamics, Lattice
Flow

21 Jan 52

"Calculating the Flow Around a Lattice of Profiles,"
S. V. Vallander, Leningrad State University
"Dok Ak Nauk SSSR" Vol LXXII, No 3, pp 345-348

Proposes a method of calcg the flow around an
infinite lattice in which the calcn is not more
complicated than the caln of the flow around an
isolated profile, as is the case with all familiar
works on the calcn of the flow around a lattice of

profiles by the potential flow of an ideal incom-
pressible fluid. Submitted by Acad V. I. Smirnov
27 Nov 51.

21T97

21T97

VALLANDER, S. V.

USSR/Physics - Hydrodynamics

1 Jun 52

"Flow of liquid in a Turbine," S. V. Vallander
Leningrad State U imeni Zhdanov

"Dok Ak Nauk SSSR" Vol 84, No 4, pp 673-676

Considers problem of construction of incompressible fluid flow without turbulence in a turbine.
The results of this analysis may be extended to all machines of this type. Received 22 Mar 52.

1. VALLANDER, C.V.
2. USSR (600)
4. Fluid Dynamics
7. "Calculation of a flow around the lattice of profiles." C.V. Vallander, Reviewed by G.S. Samoilovich, G.Yu. Stepanov, Prikl.mat. i mekh. 17 no. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

Vallander, S. V. On nonlinear hyperbolic partial differential equations of the second order. Doklady Akad. Nauk SSSR (N.S.) 89, 201-204 (1953). (Russian)

As a generalization of a previous paper [same Doklady (N.S.) 83, 637-639 (1952); these Rev. 13, 847] the following theorem is proved: necessary and sufficient conditions that a hyperbolic equation

$$(1) \quad F\left(x, y, u, \frac{\partial u}{\partial x}, \frac{\partial u}{\partial y}, \frac{\partial^2 u}{\partial x^2}, \frac{\partial^2 u}{\partial x \partial y}, \frac{\partial^2 u}{\partial y^2}\right) = 0$$

have a solution of the form

$$(2) \quad u = \Omega\{x, y, \Phi_1[\alpha(x, y)], \Phi_2[\beta(x, y)]\},$$

where Ω , α , β are certain fixed functions and Φ_1 and Φ_2 are arbitrary, are: (I) the characteristics do not depend explicitly on the solution function u ; (II) after transforming to the normal form by the characteristic equations $\xi = \alpha(x, y)$, $\eta = \beta(x, y)$ and solving for the mixed derivative, equation (1) must have the form

$$(3) \quad \frac{\partial^2 u}{\partial \xi \partial \eta} + A \frac{\partial u}{\partial \xi} + B \frac{\partial u}{\partial \eta} + C \frac{\partial u}{\partial \xi} \frac{\partial u}{\partial \eta} + D = 0,$$

where A , B , C , and D are certain functions of (ξ, η, u) ; (III) the coefficients A , B , C , and D must satisfy the relations

$$(4) \quad \begin{aligned} \frac{\partial A}{\partial \xi} + AB &= \frac{\partial D}{\partial u} + CD, \quad \frac{\partial A}{\partial u} = \frac{\partial C}{\partial \eta}, \\ \frac{\partial B}{\partial \eta} + AB &= \frac{\partial D}{\partial u} + CD, \quad \frac{\partial B}{\partial u} = \frac{\partial C}{\partial \xi}. \end{aligned}$$

Further, if conditions (I), (II), and (III) are satisfied, then the general solution of equation (3) is found implicitly in a relation $N(\xi, \eta, u) = \Phi_1(\xi) + \Phi_2(\eta)$, where Φ_1 and Φ_2 are arbitrary and N is a function found from the relation $\partial N / \partial u = \exp \int (Ad\eta + Bd\xi + Cd\eta)$.

C. G. Maple.

PP. 831-934 - UNCLASSIFIED

VALLANDER, S.V.

Nonlinear equations in secend-order partial derivatives with two independent variables reduced to the linear. Vest.Len.um.9 ne.5:19-34 My
'54. (Linear equations) (Functions, Elliptic) (MLRA 9:7)

10(4)

AUTHOR:

Vallander, S. V.

SOV/20-123-3-8/54

TITLE:

On the Application of the Method of Singularities to the Calculation of Flows of a Liquid of Radial-Axial Turbines
(O primenenii metoda osobennostey k raschetu tcheniy zhidkosti v radial'no-osevykh turbinakh)

PERIODICAL:

Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 3, pp 413-416
(USSR)

ABSTRACT:

First, some previous papers on this subject are mentioned. The present paper describes the calculations necessary for the application of the method of singularities to flows in radial-axial turbines of any shape. A previous paper by the same author (Ref 5) is assumed to be known to the reader of the present paper. The equations deduced in the previous paper are replaced by a system of equations for a flow in the plane of the lattice of the vortex sources. The solution of the new equations, which corresponds to the lattice of vortex sources, will be the sum of the solutions which correspond to the lattice of the sources and to the lattice of the vortices. In the case of the lattice of sources, there is a velocity potential Φ and a differential equation is given for this potential. An analogous equation

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On the Application of the Method of Singularities
to the Calculation of Flows of a Liquid of Radial-Axial Turbines SOV/20-123-3-8/54

is deduced for the current function Ψ which exists in the case of lattice of vortices. The boundary conditions are then explicitly given. As Φ and Ψ may be calculated in a similar manner, the author investigates only the problem of the determination of Φ . The necessary calculations are discussed step by step, and the final expression for Φ is given explicitly. For the practical integration of the homogeneous differential equations of this problem, it is advantageous to find a certain qualitative characteristic of the flows through a lattice. Theoretical and experimental investigations gave the following result: In a flow through a lattice, the components of the velocity are independent of the transverse coordinate ϑ in a distance of 1 - 3/2 pitches before and behind the lattice. This independence simplifies the integration of the homogeneous differential equations of the problem. Methods of approximation can be used for the integration of the equations and explicit

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On the Application of the Method of Singularities
to the Calculation of Flows of a Liquid of Radial-Axial Turbines SOV/20-123-3-8/54

equations can be deduced for the linear independent solution.
The author thanks Academician V. I. Smirnov for the discussion
of the present paper. There are 5 references, 4 of which are
Soviet, and 1 American.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova
(Leningrad State University imeni A. A. Zhdanov)

PRESENTED: June 30, 1958, by V. I. Smirnov, Academician

SUBMITTED: June 23, 1958

Card 3/3

VALLANDER, S.V.; GURMUZOVA, E.A.; FILIPPOV, B.V.

Integral kinetic equations for an arbitrary conservative field of
external mass forces. Aerodin. razrezh. gaz. no.1:64-66 '63.
(MIRA 17:3)

VALLANDER, S.V.

Numerical determination of aerodynamic characteristics of certain
airfoils of finite span. Vest. IgU 14:106-112 '59.

(Airfoils) (MIRA 12:9)

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858510009-4

VALLANDER, S.V.

Airfoils of finite span. Vest. LGU 14 no.19:113-120 '59.
(MIRA 12:9)
(Airfoils)

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858510009-4"

10(3), 10(6)

AUTHOR: Vallander, S.V.

SOV/43-59-19-9/14

TITLE: Numerical Calculation of Aerodynamic Characteristics of Some Wings of Finite Span

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1959, Nr 19(4), pp 106-112 (USSR)

ABSTRACT: In the present paper, written in 1947, the author considers wings whose upper and lower surfaces together form the lateral face of an obtuse cone. If

$$(2.7) \quad \frac{y}{z} = \phi\left(\frac{x}{z}\right)$$

is the equation of the corresponding cone, then the investigation is made in the coordinates $\xi = \frac{x}{z}$, $\eta = \frac{y}{z}$. It is shown that in the present case the problem of flow around (neglecting the interference between wing and fuselage) leads to a system of equations which is hyperbolic under the assumption

$$(3.5) \quad \frac{(v_x - \xi v_z)^2 + (v_y - \eta v_z)^2 + (v_x \eta - v_y \xi)^2}{1 + \xi^2 + \eta^2} \geq a^2,$$

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Numerical Calculation of Aerodynamic Characteristics
of Some Wings of Finite Span SOV/43-59-19-9/14

where a is the velocity of sound, and which can be solved
arbitrarily exact with the aid of the method of characteristics.
There is 1 figure, and no references.

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10

10(3), 10(6)

AUTHOR: Vallander, S.V.

SOV/43-59-19-10/14

TITLE: Developing Wings

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1959, Nr 19(4), pp 113-120 (USSR)

ABSTRACT: The present investigation was finished on July 3, 1948 and it was reported on September 15, 1948 in the presence of Academicians V.I.Smirnov and L.I.Sedov. A wing EFGH of finite span is called a developing wing if 1. the upper and lower surfaces of the wing are developable surfaces; 2. the leading edge EH is a straight line; 3. the rear edge FG and the cross section EF are so that the Mach lines beginning in their points meet the contour of the wing only in the points of the leading edge.

At first the plane Prandtl-Meyer flow is generalized to the flow around arbitrary developable surfaces. Then it is shown that this generalized flow can be used for an approximate calculation of developing wings.

It is assumed that the inner friction is missing in the gas, that the flow is adiabatic, that the interference between wing and fuselage can be neglected, and that the motion is stationary.

There are 4 figures and no references.

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16(1)

AUTHORS:

Aleksandrov,A.D., Akilov,G.P., SOV/43-59-19-14/14
Ashnevits,I.Ya., Vallander,S.V.,
Vladimirov,D.A., Vulikh,B.Z., Gaburin,M.K.,
Kantorovich,L.V., Kolbina,L.I., Lozinskiy,S.M., Ladyzhenskaya,
O.A., Linnik,Yu.V., Lebedev,N.A., Mikhlin,S.G., Makarov,E.M.,
Natanson,I.P., Nikitin,A.A., Polyakov,N.N., Pinsker,A.G.,
Smirnov,V.I., Safronova,G.P., Smolitskiy,Kh.L., and Faddeyev,D.K.

TITLE: Grigoriy Mikhaylovich Fikhtengol'ts (Deceased)

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki,
mekhaniki i astronomii, 1959, Nr 19(4), pp 158-159 (USSR)

ABSTRACT: This is a short obituary of G.M.Fikhtengol'ts, Professor of
the Mathematical-Mechanical Faculty of Leningrad University,
who died on June 26, 1959.
The authors mention M.V.Ostrogradskiy.
There is a photo of Fikhtengol'ts.

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USCOMINT-DC-61.787

VALLANDER, S. V. (Leningrad)

"Formulation of Problems and Integral Equations in Rarified Gas Dynamics."

report presented at the First All-Union Congress on Theoretical and Applied
Mechanics, Moscow, 27 Jan - 3 Feb 1960.

UHLANDER, S.U.

PHASE I BOOK EXPLOITATION

SOV/6201

(29)

Vsesoyuznyy s"yezd po teoreticheskoy i prikladnoy mehanike. 1st, Moscow, 1960.

Trudy Vsesoyuznogo s"yezda po teoreticheskoy i prikladnoy mehanike,
27 yanvarya -- 3 fevralya 1960 g. Obzornyye doklady (Transactions of the
All-Union Congress on Theoretical and Applied Mechanics, 27 January to
3 February 1960. Summary Reports). Moscow, Izd-vo AN SSSR, 1962.
467 p. 3000 copies printed.

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G. S. Shapiro, Scientific Secretary; G. Yu. Dzhanelidze, S. V. Kalinin,
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Transactions of the All-Union Congress (Cont.)

SOV/6201
(25)

PURPOSE: This book is intended for scientific and engineering personnel who are interested in recent work in theoretical and applied mechanics.

COVERAGE: The articles included in these transactions are arranged by general subject matter under the following heads: general and applied mechanics (5 papers), fluid mechanics (10 papers), and the mechanics of rigid bodies (8 papers). Besides the organizational personnel of the congress, no personalities are mentioned. Six of the papers in the present collection have no references; the remaining 17 contain approximately 1400 references in Russian, Ukrainian, English, German, Czechoslovak, Rumanian, French, Italian, and Dutch.

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Transactions of the All-Union Congress (Cont.)

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SECTION II. MECHANICS OF FLUIDS AND GASES

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S/020/60/131/01/015/060
B013/B007AUTHOR: Vallander, S. V.TITLE: New Kinetic Equations in the Theory
of Monoatomic GasesPERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 58 - 60
(USSR)

ABSTRACT: The present paper deals with new kinetic equations of the theory of monoatomic gases. In contrast to the Boltzmann's kinetic equation, these equations are pure integral equations and contain the boundary conditions on the body surfaces round which the gas flows. The kinetic equations may, as they contain boundary conditions, be considered to be equations of the kinetics (aerodynamics) of rarefied gases. The Boltzmann equation is a considerably "impoverished" conclusion drawn from the here discussed equations. For purposes of simplification, the external field of the mass forces is here neglected. All atoms of the gas are considered to be of the same kind, and only paired collisions of atoms are taken into account. First, the rather numerous notations are explained; they can not be given here. Next, the following definitions are introduced: 1) Such a function of the

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arguments \vec{r} , \vec{u} , and t , is called distribution function f , as is formed in such a manner that the quantity $dn_1 = f(\vec{r}, \vec{u}, t) d\Omega dw$ represents the number of atoms mathematically to be expected at the point of time t in the space cell $d\Omega$ with velocities from the cell dw . 2) The term production of an atom is applied to the last collision to which an atom was subjected and by which it acquired the present velocity. 3) The inner functions Φ of the productions are such functions of the arguments \vec{r} , \vec{u} , and t , formed so that the quantity $dn_2 = \Phi(\vec{r}, \vec{u}, t) d\Omega dw dt$ means the mathematically to be expected number of atoms produced during the time interval $(t, t + dt)$ in the space cell $d\Omega$ and which have velocities from dw . 4) The term limiting function Ψ of the production is applied to a function of the arguments \vec{r} , \vec{u} , and t , formed so that the quantity $dn_3 = \Psi(\vec{r}, \vec{u}, t) ds dw dt$ means the mathematically to be expected number of atoms produced during the time interval $(t, t + dt)$ on the element ds of the surface of the body round which the gas flows, and which after produc-

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tion had a velocity from the interval $d\omega$. 5) The term probability π of the free motion of an atom within the time interval (τ, t) is applied to the probability of a certain chance-event to be described in greater detail. 6) The term internal impact transformant T is applied to the function of the three velocity vectors \vec{u}_1 , \vec{u}_2 , and \vec{u} having the property that the quantity $dn_4 = T(\vec{u}_1, \vec{u}_2, \vec{u})d\omega$ means the mathematical expectation of a more closely defined chance-event. Finally, a "boundary-impact-transformant" is defined. Next, rather voluminous relations between the functions f , π , ϕ , and ψ are written down. From these equations it is possible, by direct substitution to eliminate the functions π , ϕ , and ψ . In this way one single integral equation $f = V(f)$ is obtained, where V denotes a certain integral operator over f . For this integral equation a problem of the kinetics (aerodynamics) of monoatomic gases may be formulated. This problem comprises flows of free molecules including such as are described by the scheme of the hydrodynamics of a perfect liquid. By applying a differential operator to $f = V(f)$, the

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New Kinetic Equations in the Theory of Monoatomic Gases S/020/60/131/01/015/060
B013/B007

Boltzmann equation notated as in the present paper is obtained.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova
(Leningrad State University imeni A. A. Zhdanov)

PRESENTED: November 9, 1959, by V. A. Fok, Academician

SUBMITTED: November 4, 1959

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25493

S/043/61/000/002/003/009

D207/D306

24.4300

AUTHORS: Belova, A.V., and Vallander, S.V.

TITLE: Equations of the kinetic theory of monoatomic gases
in the presence of the external field of mass forcesPERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki,
mekhaniki i astronomii, no. 2, 1961, 75 - 80

TEXT: This article presents a system of equations for the case of a moving gas acted upon by the constant external field of mass forces. However, for the exponential character of diminishing probability of free motion [?] the established equations are true in alternating fields of forces if the change of fields is negligible within 5 - 10 average length of free run, and in the interval of 5 - 10 average time periods between colliding atoms. An atom at any instant $2(\tau \leq q \leq t)$ while freely moving in an interval of time (τ, t) is described by the radius vector r_2 and vector u_2 .
Let t be time of an atom at a point with radius vector \bar{r} having a

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Equations of the kinetic ...

velocity \bar{u} . Let \bar{g} be an acceleration vector in a constant field of mass forces.

$$\bar{r}_q = \bar{r} - \bar{u}(t - q) + \bar{g} \frac{(t - q)^2}{2}, \bar{u}_q = \bar{u} - \bar{g}(t - q) \quad (5)$$

Δq_1 - element of an interval of time (τ, t)

$$\tau + \sum_{k=1}^1 \Delta q_k = q_1. \quad (6)$$

When an atom is at a point with the radius vector \bar{r}_1 having a velocity \bar{u}_1 in Δq_1 time, then when colliding with another atom is expressed in the following form

$$Q_1 = \Delta q_1 \iiint |\bar{u}_1 - \bar{u}'| \sigma(|\bar{u}_1 - \bar{u}'|) f(\bar{r}_1, \bar{u}', q_1) d\omega'. \quad (7)$$

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Equations of the kinetic ...

Then the probability of free motion Π of an atom in an interval of time (τ, t) is at that moment τ in point with radius vector \bar{r}_τ and having velocity of \bar{u}_τ , but at an instant t the atom will be in point with radius vector \bar{r} having a velocity u , will be

$$\Pi(\bar{r}, \bar{u}, t, \tau) = \dots \quad (8)$$

$$= e^{-\int_{-\infty}^{+\infty} \left[\iint_{-\infty}^{+\infty} | \bar{u} - \bar{v}(\tau-q) - \bar{u}' | \cdot (| \bar{u} - \bar{v}(\tau-q) - \bar{u}' |) \cdot (\bar{r} - \bar{v}(\tau-q) + \bar{v} \frac{(t-q)}{2}, \bar{u}' q) dq' \right] dq}$$

On the other hand the expression for $d\Pi$ can be obtained by introducing the function Φ and $\tilde{\Phi}$. Let X_1 be a point (Fig. 1). Radius vector \bar{r}_1 of point X_1 is marked as \bar{r}_1 . Through point X_1 with velocity \bar{u} . This trajectory will intersect the stationary area of the streamlined body at some point X_s with radius vector \bar{r}_s . From $q = \tau_s$ this indicates the notation of the vector \bar{r}_s and velocity \bar{u}_s .

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Equations of the kinetic ...

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If the established trajectory will not meet the surface of the streamline body then x_s is infinity. Consider an element of stationary surface dS around X_s . It is obvious from Fig. 1 that particles leaving at the instant τ_s from different points of an element dS at the same velocity will fill the area dS_τ equal and parallel to element dS . For determining the number of quantities dn it is necessary to introduce around point X_1 the element of volume $d\Omega$. The element of interval of time will be dT . The element of volume $d\Omega$ is taken as a curved cylinder whose lower base dS , is around point X_1 and upper around the point dS_2 all being parallel. A portion of the trajectory of an atom parallel and equal to $d\Omega$ is considered. The atom passes through the base dS ; at instant $t-dT$ with a velocity \bar{u}_{t-dT} , in time t having a velocity \bar{u} will reach the upper base of the cylinder dS_2 . In all calculations it is necessary

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Equations of the kinetic ...

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to retain small quantities of the first order only in respect of dT . Then the height of cylinder $dH = /u_{t-dT}/dT$ can be accepted as $dH/u_n/dT$, and volume $d\Omega = /u_n/dS \cdot dT$. Representing cylinder $d\Omega$ will be directed as u and trajectory of atoms at an instant t with velocity \bar{u} will coincide with corresponding points dS_1 and dS_2 . The number of particles dn entering $d\Omega$ from cylinder ABCD is counted. Cylinder with bases dS and dS_1 shows atoms coming out from the boundary dS with velocity u_s . On trajectory $X_s X_1$ a point X is taken and volume G established with base dS and height dH . Particles leaving dS_τ at instant τ with velocity \bar{u}_τ and in the case of its free motion at time t will intersect dS_1 having velocity \bar{u} . Particles belonging to volume G at time t with velocity \bar{u} will reach the upper base of volume $d\Omega - dS_2$, they should emerge from dS_τ at instant $\tau - dT$ with velocity $\bar{u}_\tau - dT$. Relationship dT Card 5/8

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Equations of the kinetic ...

with $d\tilde{T}$ is as follows:

$$/(u_{\tau})_n/d\tilde{T} = /u_n/dT = dH \quad (10)$$

whilst counting the numbers of atoms in a volume $d\Omega$ at interval of time dT the change of functions Φ , Π can be ignored because its change gives quantities of a higher order. Then for the whole interval of time $d\tilde{T}$ inside G_1 functions Φ and Π will be considered as equal $\Phi(\bar{r}_{\tau}, \bar{u}_{\tau}, \tau)$ and $\Pi(\bar{r}, \bar{u}, t, \tau)$ then the number of atoms dn_{τ} which supply G in time dT to volume $d\Omega$ with the necessary velocities can be written in the form

$$dn_{\tau} = dS_{\tau} \cdot dh \cdot d\omega_{\tau} \cdot (\bar{r}_{\tau}, \bar{u}_{\tau}, \tau) \cdot (\bar{r}, \bar{u}, t, \tau) d\tilde{T} \quad (11)$$

changing $d\tilde{T}$ for dT from (10) taking into account equalities

$$dS_{\tau} = dS, d\Omega = /u_n/dSdT, d\omega_{\tau} = d\omega \quad (12)$$

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Equation of the kinetic ...

selecting an independent variable τ and, then introducing $\frac{dh}{(u_\tau)_n} =$
 $= dt,$

$$dn_\tau = d\Omega dw \Phi(\bar{r}_\tau, \bar{u}_\tau, \tau) \Pi(\bar{r}, \bar{u}, t, \tau) dt. \quad (13)$$

There are 1 figure and 2 Soviet-bloc references.

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D207/D306

54300

AUTHORS: Vallander, G.V., and Belova, A.V.

TITLE: An integral kinetic equation for a mixture of gases possessing internal degrees of freedom

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya matematiki, mehaniki i astronomii, no. 2, 1961, 81 - 86

TEXT: A mixture of polyatomic gases in which chemical reactions may occur is considered, in the presence of constant external gravitational field. However, only binary collisions are taken into account and coulombic forces are assumed to be absent. Also the particles are to be distinguished only by their energy states. The state of such a mixture can be described by a finite number of distribution functions $f_i(\bar{r}, \bar{u}, t)$ where i denotes a particular energy state, \bar{r} = radius vector, \bar{u} = velocity vector of a particle at a moment t , and the purpose of the present work is to derive a complete system of integral equations, from which functions f_i can be

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An integral kinetic equation ...
found. Eqs.

$$\Pi_I(\bar{r}, \bar{u}, t, \tau) = \prod_k \Pi_{Ik} = \exp \sum_k \left\{ - \int \left[\int_{-\infty}^{+\infty} |\bar{u}_k - \bar{g}(t-q) - \bar{u}'| \times \right. \right. \\ \left. \left. \times \sigma_{Ik}(|\bar{u}_k - \bar{g}(t-q) - \bar{u}'|) \cdot f_h \left(\bar{r} - \bar{u}_k(t-q) + \bar{g} \frac{(t-q)^2}{2}, \bar{u}', q \right) d\omega' \right] dq \right\}. \quad (5)$$

$$f_1(\bar{r}, \bar{u}, t) = \frac{1}{(u_s)_n} \tilde{\Phi}_1(\bar{r}_s, \bar{u}_s, \tau_s) \Pi_1(\bar{r}, \bar{u}, t, \tau_s) + \\ + \int \Phi_1 \left[\bar{r} - \bar{u}(t-\tau) + \bar{g} \frac{(t-\tau)^2}{2}, \bar{u} - \bar{g}(t-\tau), \tau \right] \Pi_1(\bar{r}, \bar{u}, t, \tau) d\tau. \quad (6)$$

$$\Phi_I(\bar{r}, \bar{u}, t) = \frac{1}{2} \sum_k \sum_l \int \int_{-\infty}^{+\infty} \int \int \int \int |\bar{u}_1 - \bar{u}_2| \sigma_{kl}(|\bar{u}_1 - \bar{u}_2|) f_h(\bar{r}, \bar{u}_1, t) \times \\ \times f_l(\bar{r}, \bar{u}_2, t) T_{kl}(\bar{u}_1, \bar{u}_2, \bar{u}) d\omega_1 d\omega_2. \quad (13)$$

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25494
S/043/61/000/002/004/009
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An integral kinetic equation ...

$$\text{and } \tilde{\Phi}_l(\bar{r}_s, \bar{u}, t) = \sum_k \iint_{(u_1)_n < 0} |(u_1)_n| f_k(\bar{r}_s, \bar{u}_1, t) \tilde{T}_k^l(\bar{u}_1, \bar{n}, \bar{u}, \theta) d\omega_1. \quad (16)$$

give

$$f_l(\bar{r}, \bar{u}, t) = \frac{1}{|(u_s)_n|} \tilde{\Phi}_l(\bar{r}_s, \bar{u}_s, \tau_s) \Pi_l(\bar{r}, \bar{u}, t, \tau_s) + \\ + \int_{\tau_s}^t \Phi_l\left[\bar{r} - \bar{u}(t-\tau) + \bar{g}\frac{(t-\tau)^2}{2}, \bar{u} - \bar{g}(t-\tau), \tau\right] \cdot \Pi_l(\bar{r}, \bar{u}, t, \tau) d\tau. \quad (17)$$

$$\Pi_l(\bar{r}, \bar{u}, t, \tau) = \exp \sum_k \left\{ - \int_{-\infty}^{+\infty} \left[\iint_{-\infty}^{+\infty} |\bar{u} - \bar{g}(t-q) - \bar{u}'| \times \right. \right. \\ \times \sigma_{kl}(|\bar{u} - \bar{g}(t-q) - \bar{u}'|) f_k\left(\bar{r} - \bar{u}(t-q) + \bar{g}\frac{(t-q)^2}{2}, \bar{u}', q\right) d\omega' \left. \right] dq \right\}, \quad (18)$$

$$\Phi_l(\bar{r}, \bar{u}, t) = \frac{1}{2} \sum_k \sum_l \iint_{-\infty}^{+\infty} \iint_{-\infty}^{+\infty} |\bar{u}_1 - \bar{u}_2| \sigma_{kl}(|\bar{u}_1 - \bar{u}_2|) \times \quad (19)$$

Card 3/5

25494
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D207/D306

An integral kinetic equation ...

$$\times f_k(\bar{r}, \bar{u}_1, t) f_l(\bar{r}, \bar{u}_2, t) T_{kl}^t(\bar{u}_1, \bar{u}_2, \bar{u}) d\omega_1 d\omega_2. \quad (19)$$

$$\tilde{\Phi}_i(\bar{r}_s, \bar{u}, t) = \sum_k \iiint_{(u_i)_n < 0} |(u_i)_n| f_k(\bar{r}_s, \bar{u}_1, t) \tilde{T}_k^i(\bar{u}_1, \bar{n}, \bar{u}, \theta) d\omega_1. \quad (20)$$

from which by elimination of \bar{n}_1 , $\bar{\Phi}_i$ and $\tilde{\Phi}_i$, the equation

$$f_i = V_i(f_1, \dots, f_k, \dots) \quad (21)$$

is obtained, where V_i are easily found integral operators acting on functions f_i . If Eq. (21) is multiplied on both sides by

$$\frac{\partial}{\partial t} + u_1 \frac{\partial}{\partial x_1} + u_2 \frac{\partial}{\partial x_2} + u_3 \frac{\partial}{\partial x_3} + g_1 \frac{\partial}{\partial u_1} + g_2 \frac{\partial}{\partial u_2} + g_3 \frac{\partial}{\partial u_3}, \quad (22)$$

integrodifferential equations obtained are seen to be generalized Boltzmann equations, suitable for investigating mixtures of gases

Card 4/5

An integral kinetic equation ...

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D207/D306

chemically dissimilar. In many cases the solution of (21) can be obtained by means of successive approximations. There are 2 Soviet-bloc references.

Card 5/5

BELOVA, A.V.; VALLANDER, S.V.

Integral kinetic equations in the theory of monatomic gases in the
presence of an external field of mass forces. Vest.LGU 16 no.7:
75-80 '61. (MIRA 14:5)

(Aerodynamics)

VALLANDER, S.V.; BELOVA, A.V.

Integral kinetic equations for a gas mixture with internal degrees
of freedom. Vest.LGU 16 no.7 1981-86 '61. (MIRA 14:5)
(Aerodynamics)

VALLANDER, S.V.; GURMUZOVA, E.A.; FILIPPOV, B.V.

Integral kinetic equations in the case of an arbitrary conservative field of external mass forces. Vest. LGU 17 no.13:87-89
'62. (MIRA 15:7)
(Integral equations)

VALLANDER, S.V.

Equations and the presentation of problems in the dynamics of rarefied gases. Aerodin. no.1:7-37 '63.

General formulation of fluid flow problems and similarity conditions of flows for rarefied gaseous mixtures with internal degrees of freedom. Ibid.:53-63 (MIRA 17:3)

BEOLOVA, A.V.; VALLANDER, S.V.

Integral kinetic equations in the theory of monatomic gases in
the presence of an external field of mass forces. Aerodin. razresh.
gaz. no.1:38-44 '63.

Integral kinetic equations for a gaseous mixture with internal
degrees of freedom. Ibid.:45-52 (MIRA 17:3)

VALLANDER, S. V.; LINNIK, Yu. V.; PETRASHEN', G. I.; POLYAKHOV, N. N.;
SMIRNOV, V. I.; FADDEYEV, D. K.

Aleksandr Danilovich Aleksandrov; on his 50th birthday. Vest.
(MIRA 16:1)
LGU 18 no.1:7-9 '63.

(Aleksandrov, Aleksandr Danilovich, 1912-)

VALLANDER, S.V.; MAGNIBEDA, Ye.A.

General formulation of problems involving relaxation processes
in gases with internal degrees of freedom. Vest. LGU 18 no.13:
77-91 '63. (MIRA 16:9)
(Mechanics) (Differential equations)

ACCESSION NR: AP4040721

S/0043/64/000/007/0057/0070

AUTHOR: Vallander, S. V.; Yegorova, I. A.; Rydalevskaya, M. A.

TITLE: The statistical Boltzmann distribution as a solution of the kinetic equations of gaseous mixtures

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mehaniki, i astronomii, no. 19-⁷ 1964, 57-70

TOPIC TAGS: Boltzmann distribution, gas law, gas kinetics, statistical distribution, statistical physics, detailed balance

ABSTRACT: After analyzing the differences between the two possible approaches to the derivation of a Boltzmann statistical distribution (i.e. either assuming the general laws of statistical physics to be valid or proceeding from the kinetic equations and finding a statistical distribution as a solution of these equations at equilibrium), the authors apply the second technique to the study of two principal questions: a) the type of internal interaction of gas particles which will guarantee the existence of solutions having the form of a Boltzmann distribution; b) the conditions under which the Boltzmann distribution will be the unique solution. The latter question has not previously been examined. On

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ACCESSION NR: AP4040721

the basis of a detailed mathematical analysis of the behavior of a gas mixture, the authors conclude that certain kinetic equations (obtained in an earlier paper), which are suitable for gaseous mixtures when there is an interaction between the gas particles and when chemical reactions are allowed to occur, have an equilibrium solution in the form of a Boltzmann distribution; for such a solution to exist it is sufficient that the principle of detailed balance holds

$$\begin{aligned} & |u_1 - u_2| \sigma_{kl}(u_1, u_2) T_{kl}^{in}(u_1, u_2, u_1, u_2) = \\ & = |u_1 - u_2| \sigma_{lk}(u_1, u_2) T_{lk}^{in}(u_1, u_2, u_1, u_2), \end{aligned}$$

and that only an exchange reaction occurs in the gases. If the mixture being studied is of monatomic gases and the principle of detailed balance holds, then the unique equilibrium distribution, being the solution of the kinetic equation, is the usual statistical Boltzmann distribution. Here the equilibrium distribution is completely determined by the given temperature and the atomic composition of the gases. If the principle of detailed balance is operating in the gaseous mixture but even one polyatomic component is present, then a chemical degeneration of the statistical distribution occurs. Finally, if the principle of detailed balance does not hold during collisions of the gas particles, then, as is known, a distribution is established which is different from the Boltzmann

Card 2/3

ACCESSION NR: AP4040721

distribution. Orig. art. has: 47 formulas.

ASSOCIATION: none

SUBMITTED: 13May63

ENCL: 00

SUB CODE: HE

NO REF SOV: 003

OTHER: 005

Card 3/3

ACCESSION NR: AP4040727

S/0043/64/000/007/0155/0161

AUTHOR: Vallander, S. V.; Yegorova, I. A.; Rydalevskaya, M. A.

TITLE: Extension of the Chapman-Enskog method to chemically-reactive gas mixtures with internal degrees of freedom

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 7, 1964, 155-161

TOPIC TAGS: gas kinetics, Chapman Enskog method, gas theory, kinetic theory, gas dynamics, internal freedom

ABSTRACT: The work in this paper differs from earlier work on the topic in two respects: 1) a gas mixture in which chemical exchange reactions can take place is considered, and 2) a different system of macroscopic parameters is chosen to represent the distribution function; in this connection, new macroscopic equations for the determination of these parameters are considered. The starting point for this paper was two previous papers by the senior author (A. V. Belova and S. V. Vallander. Integral'nye kineticheskiye uravneniya s vnutrennimi stepeniami svobody. Vestnik LGU, No. 7, 1961; S. V. Vallander, I. A. Yegorova and M. A. Rydalevskaya. Statisticheskoye raspredeleniye Bol'tsmana kak resheniye kineticheskikh uravneniy diya gazovykh smesey. Vestnik LGU, No. 7, 1964).

Card, 1/2

ACCESSION NR: AP4040727

From the first of these two papers, the author borrowed the notations for the collision integrals; from the second, he selected the form of the equilibrium solution of the corresponding system of Boltzmann equations. Separate sections are devoted to the zero and first approximations. Orig. art. has: 39 formulas.

ASSOCIATION: none

SUBMITTED: 00Dec63

ENCL: 00

SUB CODE: ME, TD

NO REF SOV: 002

OTHER: 004

Card
Card

TSYAN' SYUE-SEN' [Ch'ien Hsueh-Sen]; BARANTSEV, R.G.[translator];
SPESHNEV, N.A.[translator]; FILIPPOV, B.V.[translator];
VALLANDER, S.V., red.; POPOV, A.S., red.

[Physical mechanics. Translated from the Chinese] Fizicheskala
mekhanika. Moskva, Izd-vo "Mir," 1965. 544 p.
(MIRA 18:10)

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SUBMITTED: 00/65

NO REF

VALLANDER, S.V.; GINZBURG, I.P.; POLYAKOV, N.N.; YUSHKOV, P.P.

Konstantin Ivanovich Strakhovich, 1905- ; on his 60th birthday.
Inzh.-fiz. zhur. 8 no.3:409-410 Mr '65.
(MIRA 18:5)

"APPROVED FOR RELEASE: 08/31/2001

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FROM, A.A.; GRONVAL', A.; VALLENUS, G.; ZOAR, B.

Antigenic nature of dextran-precipitating proteins, forming spontaneously in normal human serum. Preliminary report.
Probl.gemat.i perel.krovi no.8:45-47 '61. (MIRA 14:9)

1. Iz otdeleniya klinicheskoy khimii universitetskogo gospitalya Uppsala (Shvetsiya) i TSentral'nogo ordena Lenina instituta hematologii i perelivaniya krovi (dir. - deyствител'nyy chlen AMN SSSR prof. A.A. Bagdasarov). Ministerstva zdravookhraneniya SSSR.
(DEXTRAN) (BLOOD PROTEINS)

VALLENT, Karoly, dr.; CSERNOHORSZKY, Vilmos, dr.

A case of cavernous lymphangiomas of the thoracic wall in a 2-year-old infant. Magy. sebeszet 14 no.4:237-239 Ag '61.

1. A Budapesti Orvostudomanyi Egyetem I. sz. Sebeszeti klinikajának
közleménye Igazgató: Dr. Hedri Endre egyetemi tanár.

' (LYMPHANGIOMA in inf & child)
(THORAX neopl)

FACHET, J.; STARK, E.; VALLENT, K.; PALKOVITS, M.

Some observations on the functional interrelationship between the thymus and the adrenal cortex. Acta med. acad. sci. hung. 18 no.4: 461-466 '62.

1. Department of Pathophysiology, Research Institute of Experimental Medicine, Hungarian Academy of Sciences (Director: I. Rusznyak), and 1st Department of Surgery (Director: E. Hedri), University Medical School, Budapest.

(THYMUS GLAND) (ADRENAL CORTEX) (ALDOSTERONE)
(CORTICOSTERONE) (FORMALDEHYDE)

HUNGARY

PACHET, J. MD, STARK, E. MD, VALLENT, K. MD and PALKOVITS, M. MD, of the Experimental Medical Research Institute (Kiserleti Orvostudomanyi Intézet) of the MTA, Department of Pathophysiology (Izraeltani Osztály), and the Budapest College of Medicine (Budapesti Orvostudományi Székhely), Surgical Clinic No 1. (I. Sebészeti Klinika).

"Observations Regarding the Connection Between Thymus and Adrenocortical Function"

Budapest, Orvosi Hetilap, Vol 103, No 47, 25 Nov 62; pp 2209-2213.

Abstract: [Authors' Hungarian summary] Under the experimental conditions employed by the authors the *in vitro* corticosterone-producing ability of the adrenals of thymectomized animals did not differ significantly from that of the controls. The corticosterone level of the peripheral blood of thymectomized animals was 30% lower than that of the corresponding controls. Thymectomy increased the aldosterone-producing ability of the adrenals *in vitro*. After a three- or five-day heparine treatment the aldosterone-producing ability of the adrenals of thymectomized animals de-

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HUNGARY

Budapest, Orvosi Hatlap, Vol 103, No 47, 25 Nov 62, pp 2209-2213.

creased. After a five-day formalin treatment the aldosterone-producing ability increases significantly and the volume of the cell nuclei of the adrenal glomerulosa is also significantly greater, in analogy with the values observed with thymectomised animals - as compared with the approximate controls. [24 references, predominantly Western].

12/2

FACHET, Jozsef, dr.; VALLENT, Karoly, dr.; PALKOVITS, Miklos, dr.;
FOLDES, Janos, dr.

The effect of thymectomy on the function of the thyroid gland.
Magy. radiol. 15 no.6:351-355 N '63.

1. MTA. Kiserleti Orvostudomanyi Kutato Intezet Korelettani
Osztalyanak, a Budapesti Orvostudomanyi Egyetem I sz. Sebeszeti
Klinikajának és a Budapesti Orvostudomanyi Egyetem I sz.

Belgyogyaszati Klinikajának kozleménye.
(THYMUS GLAND) (PHYSIOLOGY)
(THYROID FUNCTION TESTS)
(IODINE ISOTOPES, DIAGNOSTIC)
(THYRONINE)

FACHET, Jozsef; STARK, Ervin; PALKOVITS, Miklos; VALIENT, Karoly.

Effect of thymectomy on liver regeneration following partial
hepatectomy. Kiserl. orvostud. 16 no.1:70-74 Ja'64.

1. MTA Kiserleti Orvostudomanyi Kutato Intezet Korelettani
Osztalya es Budapesti Orvostudomanyi Egyetem I. sz. Sebeszeti
Klinikaja.

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VALLENT, Karoly dr.; FACHET, Jozsef, dr.

The role of heparin in the regulation of water-electrolyte
balance. Magy. sebesz. 17 no.3:147-153 Je'64

1. Budapesti Orvostudomanyi Egyetem I. sz. Sebészeti Klinikaja-
nak es a MTA [Magyar Tudomanyos Akademia] Kiserleti Orvostu-
domanyi Kutato Intezete Korelettani Osztalyanak kozlemenye.

FARINET, J.; VALLET, R.; FALKOVITZ, M.; AND DEB

Influence of the thymus on adrenocortical hyperactivity in
hypothyroidism. Acta med. Acad. sci. Hung. 20 no.2:281-287
'64.

1. Department of Endocrinology, Institute of Experimental
Medical Research (Director: I. Pukanyi), Hungarian Academy
of Sciences, and First Department of Surgery (Professor:
I. Pukanyi), University Medical School, Budapest.

VALLENT, K.; STEKKER, K.; FONYODI, S.

On the effect of heparin therapy on the serum protein fractions
and the qualitative blood picture in postoperative septic con-
ditions. Acta chir. acad. sci. Hung. 6 no.2:165-172 '65.

1. I. Chirurgische Klinik Direktor: Prof. Dr. P. Rubanyi) der
Medizinischen Universitaet, Budapest.

FACHET, J.; PALKOVITS, M.; VALLENT, K.

Effect of neonatal thymectomy on endocrine and lymphatic organs,
reticular elements and blood count. Part 2. Acta med. acad. sci.
Hung. 21 no.3:305-310 '65.

1. Department of Pathophysiology, Research Institute for Experimental
Medicine, Hungarian Academy of Sciences, and First Department of
Surgery, University Medical School, Budapest. Submitted February 24,
1965.

L 15513-66

ACC NR: AT6007474

SOURCE CODE: HU/2505/65/026/00X/0064/0065

AUTHOR: Fachet, J.; Vallent, K.; Stark, E.

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B+1

ORG: Department of Pathophysiology, Research Institute of Experimental Medicine, Hungarian Academy of Sciences, Budapest (Magyar Tudomanyos Akademia, Kiserleti Orvostudomanyi Kutatointezet, Koreletti Osztaly); II. Department of Surgery, Medical University of Budapest, Budapest (Budapesti Orvostudomanyi Egyetem, II. Sebeszeti Tanszek)

TITLE: Effect of thymectomy, adrenalectomy and corticoid treatment on the serum heparin level in the rat /This paper was presented at the 29th Meeting of the Hungarian Physiological Society held in Szeged from 2 to 4 July 1964/

SOURCE: Academia scientiarum hungaricae. Acta physiologica, v. 26, Supplement, 1965, 64-65

TOPIC TAGS: rat, endocrinology, gland, serum, hormones, corticosteroid, biologic metabolism, carbohydrate

ABSTRACT:

The study was carried out on

operated and sham-operated male Wistar rats. Treatment with hydrocortisone

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ACC NR: AT6007474

(5 mg/100 g, i.m.), DOCA (1 mg/100 g, i.m.) and physiological saline, respectively, was begun 48 hours after the operations. On the 10th day, one hour after the last injection, the animals were decapitated. Thrombin inactivation was used to estimate the serum heparin level. The serum heparin level of thymectomized rats was 9.6 ± 0.3 ; adrenalectomized rats, 20.6 ± 0.4 ; the controls, 16.6 ± 0.3 /ml. In the normal control rats, the serum heparin level was significantly reduced by hydrocortisone treatment whereas treatment with DOCA had no effect. In thymectomized animals, hydrocortisone treatment caused a slight, DOCA treatment a marked elevation in the serum heparin level. Further evidence was provided by the study as to the role played by the thymus in acid mucopolysaccharide metabolism. [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 2/2 ✓

HUNGARY

VALLENT, Karoly, Dr. FACHET, Jozsef, Dr. MUNDI, Bela, Dr; Medical University of Budapest, I. Surgical Clinic (Budapesti Orvostudomanyi Egyetem, I. sz. Sebeszeti Klinika), and Hungarian Academy of Sciences, Institute of Experimental Medical Research, Department of Pathophysiology (MTA — Magyar Tudomanyos Akademia —, Kiserleti Orvostudomanyi Kutato Intezet, Korelettani Osztaly).

"Correlations Between Hyperthyroidism, Blood Heparin Level, and Adrenocortical Function."

Budapest, Magyar Sebeszet, Vol XIX, No 2, Apr 66, pages 91-95.

Abstract: [Authors' Hungarian summary] Among hyperthyroid patients, the serum heparin level was found to be higher than in the healthy control group. Further elevation of the serum heparin level was noted 48 hours after subtotal thyroid resection. Two weeks after the operation, the serum heparin level decreased to the normal value obtained in the control group. In hyperthyroid patients, the 24 hour water and Na ion excretion was higher while the neutral 17-ketosteroid excretion was lower than in the control group. Two weeks after subtotal thyroidectomy, the 17-ketosteroid excretion increased considerably and the serum heparin level decreased. It is thought that hyperheparinemia may also play a role in decreased adrenocortical function as well as in increased water and Na ion excretion in cases of hyperthyroidism. 6 Hungarian, 23 Western references.

1/1

VALLENT, Karoly, Dr. MUNDI, Bela, Dr. PERNER, Ferenc, Dr; Medical University of Budapest, I. Surgical Clinic (Budapesti Orvostudomanyi Egyetem, I. sz. Sebeszeti Klinika).
APPROVED FOR RELEASE 08/31/2001gr: RUBANYI, Bal, Dr. professor
(Budapesti Orvostudomanyi Egyetem, I. sz. Sebeszeti Klinika). CIA-RDP86-00513R001858510009-4

"The Effect of Thyroidectomy, Thyrotropic Hormone and Thyroxin Treatment on the Serum Heparin Content, Leukocyte and Eosinophilic Cell Count."

Budapest, Magyar Sebeszet, Vol XIX, No 2, Apr 66, pages 96-100.

Abstract: [Authors' Hungarian summary] A considerable increase in the serum heparin level and blood coagulation time was caused by thyroidectomy within 24-48 hours after the operation. TSH treatment led to the increase in the serum heparin level and blood coagulation time, and this elevation remained significant even 24 hours later. Thyroxin treatment led to a decrease in the serum heparin level as early as 4 hours after administration. Thyroidectomy and TSH treatment caused an increase in the absolute eosinophile and leukocyte counts which varied with the serum heparin content. It is assumed that TSH plays an important role in the regulation of serum heparin content. 5 Hungarian, 16 Western references.

1/1

Hematology

HUNGARY

VALLENT, Karoly, MUNDI, Bela, PERNER, Ferenc; Medical University of Budapest,
I. Surgical Clinic (Budapesti Orvostudomanyi Egyetem, I. sz. Sebeszeti
Klinika).

"Effect of Heparin and Corticoid Therapy on the Eosinophilic Cell Count
in the Circulation."

Budapest, Kiserletes Orvostudomany, Vol XVIII, No 4, Aug 66, pages 439-443.

Abstract: [Authors' Hungarian summary] Heparin treatment caused a significant elevation in the eosinophilic cell count in the circulation, ACTH or corticoid treatment resulted in a decreased eosinophilic cell count. The absolute eosinophilic cell count was considerably increased by spironolactone. In the doses used in the experiments, corticoid treatment resulted in a moderation, but no inhibition of the increase in absolute eosinophilic cell count in response to heparin therapy. It is assumed that heparin plays a role in the regulation of the eosinophilic cells. 5 Hungarian, 25 Western references. [Manuscript received 11 Sep 65.]

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Trudy Kuybyshevsk. gos. med. in-ta, Vol. I, 1948, p. 110-18
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TVOROVSKIY, S.Ye., inzh.; VASIL'EV, I.M., inzh.; BAB, A.P., inzh.;
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Centralized grinding of metal-cutting tools. Meshinostroenie
(MOPA 18.9)
no.5:7-8 S-0 '65.

15G79

VALLER, L.

USSR/Banking 4908.0100
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"Review of L. Valler's Book, 'Savings Banks in the USSR', "V. Blyakher, A. Davidson, 2 pp

3 "Sov Finansy" Vol VIII, No 9

Textbook critically reviewed for not accenting national economic significance of savings banks in USSR. Author called to task for not showing that savings in USSR are made possible by more abundant life and not as result of doing without necessities to save, as is the case in capitalistic countries. Book considered a good coverage of subject matter otherwise.

15G79

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3 Izd., Perer I Dop. Moscow, Gosfinizdat, 1957.
188 p.

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(MIRA 10:10)
S '57. (Savings banks)

VALLER, Lazar' Borisovich

[Savings banks abroad] Sberegatel'nye kassy v zarubezhnykh
stranaakh. Moskva, Gosfinizdat, 1960. 102 p. (MIRA 15:8)
(Savings---Banks)

VALLER, L.

Change in the price scale savings of the population. Min. SSSHL21
no.8:82-86 Ag '60. (MIRA 13:8)
(Savings and thrift) (Money)

VALLER, L.

Compulsory savings under the "People's Capitalism" banner. Fin.
SSSR 22 no.11:29-33 N '61. (MIRA 14:11)
(Saving and thrift) (Capitalism)

DALIN, M.A.; SEREBRYAKOV, B.R.; MANGASARYAN, N.A.; ABAYEV, G.N.;
VALLERSHTEYN, A.S.

Synthesis of acrylonitrile by oxidative ammonolysis of propylene
in a fluidized catalyst bed. Azerb.khim.zhur. no.4:28-33 '65.
(MIRA 18:12)

1. VNIIolefin. Submitted August 16, 1964.

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CIA-RDP86-00513R001858510009-4

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858510009-4"

VALLIKIVI, A.Ya.; GAMMERMAN, M.Ya. [Hammerman, M.]

Problem concerning the errors and regulation of TS-1 heat registers.
Teploenergetika 9 no.12:67-71 D '62. (MIRA 16:1)

1. Tallinskiy zavod izmeritel'nykh priborov.
(Heat--Measurement)

VALLIS, G.E.

Complete processing of sulfite liquors. Gidroliz.i lesokhim.
prom. 15 no.8:29-30 '62.
(MIRA 15:12)

1. Slokskiy tsellyulozno-bumazhnyy kombinat.
(Sulfite liquor)

L 26508-66 EWT(1)/T IJP(c) GG

ACC NR: AP6012463

SOURCE CODE: UR/0181/66/008/004/1064/1078

AUTHOR: Vallis, R. F.; Ipatova, I. P.; Maradudin, A. A.

ORG:

Ioffe AN SSSR, Leningrad (Fiziko-tehnicheskiy institut AN SSSR)

TITLE: Temperature dependence of the line width of the fundamental lattice absorption in ionic crystals

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1064-1078

TOPIC TAGS: ionic crystal, crystal absorption, temperature dependence, line width, dielectric constant, electric conductivity

ABSTRACT: The purpose of the investigation was to confirm the qualitative expression obtained by L. E. Gurevich and I. P. Ipatova (ZhETF v. 45, 231, 1963) for the fundamental absorption line, with account taken of the anharmonicities of third and fourth order, by numerically calculating the contributions of these anharmonicities to the line width on the basis of a realistic model of ionic crystals. As a first step in this direction, the authors calculate the frequency and temperature dependences of the line width for crystals of the NaCl type and derive an expression for the dielectric constant of this crystal in a form convenient for numerical calculations. It is shown as part of the calculations that in an ionic crystal of the NaCl type, regardless of the direction of propagation of the lattice oscillations there exist at zero

Card 1/2

L 26508-66

ACC NR: AP6012463

wave vector one purely longitudinal optical branch and two degenerate purely transverse branches. This makes it possible to separate in the real part of the conductivity tensor the contribution describing the reaction of the crystal to a longitudinal external field from the contribution describing the reaction to a transverse external field, and the latter makes it possible to calculate the light absorption in the crystal. Orig. art. has: 1 figure and 75 formulas.

SUB CODE: 20/ SUBM DATE: 15Aug65/ ORIG REF: 003/ OTH REF: 018

Card 2/2 CC

VALLIT, N.I.

Using the method of polygons in adjusting tied-in nets. Geod.1
kart. no.12:18-22 D '62. (MIRA 16:2)
(Leveling)

Ual'ner, Kh. A.

PHASE I BOOK EXPLOITATION

SOV/6206 75

Konferentsiya po teorii plastin i obolochek. Kazan', 1960.

Trudy Konferentsii po teorii plastin i obolochek, 24-29 oktyabrya 1960. (Transactions of the Conference on the Theory of Plates and Shells Held in Kazan', 24 to 29 October 1960). Kazan', [Izd-vo Kazanskogo gosudarstvennogo universiteta] 1961. 426 p. 1000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Kazanskiy filial. Kazanskiy gosudarstvennyy universitet im. V. I. Ul'yanova-Lenina.

Editorial Board: Kh. M. Mushtari, Editor; F. S. Isanbayeva, Secretary; N. A. Alumyaev, V. V. Bolotin, A. S. Vol'mir, N. S. Ganiyev, A. L. Gol'denveyzer; N. A. Kil'chevskiy, M. S. Kornishin, A. I. Lur'ye, G. N. Savin, A. V. Sachenkov, I. V. Svirskiy, R. G. Surkin, and A. P. Filippov. Ed.: V. I. Aleksagin; Tech. Ed.: Yu. P. Semenov.

PURPOSE: The collection of articles is intended for scientists and engineers who are interested in the analysis of strength and stability of shells.

Card 1/14

Transactions of the Conference (Cont.)

SOV/6206

75

COVERAGE: The book is a collection of articles delivered at the Conference on Plates and Shells held in Kazan' from 24 to 29 October 1960. The articles deal with the mathematical theory of plates and shells and its application to the solution, in both linear and nonlinear formulations, of problems of bending, static and dynamic stability, and vibration of regular and sandwich plates and shells of various shapes under various loadings in the elastic and plastic regions. Analysis is made of the behavior of plates and shells in fluids, and the effect of creep of the material is considered. A number of papers discuss problems associated with the development of effective mathematical methods for solving problems in the theory of shells. Some of the reports propose algorithms for the solution of problems with the aid of electronic computers. A total of one hundred reports and notes were presented and discussed during the conference. The reports are arranged alphabetically (Russian) by the author's name.

Card 2/14

Transactions of the Conference (Cont.)	SOV/6206
Borovskiy, P. V. Application of the Method of Net to the Analysis of Parallelogram-Shaped Plates	33
Borodachev, N. M. Vibration of Circular and Annular Plates Under the Action of Cyclic Loading	37
Bulgakov, V. N. Application of Numerical Methods to the Analysis of a Toroidal Shell	41
Burmistrov, Ye. F. Bending of a Cylindrical Orthotropic Shell of Variable Thickness	46
Vallner, Kh. A. Determination of the Load-Carrying Capacity of Annular Rigid-Plastic Plates Under Small Deflections	53
Valov, G. M. Bending of a Thin Rectangular Cantilever Plate With Arbitrarily Distributed Transverse Loading	60

Card 4/14

VALLO, Dezso, dr.; PERKEDI, Janos, dr.

Obstetric aspects of Rh immunization. Magy. noorv. lap. 19 no.
5:311-315 Sept 56.

1. Az Orvostovabbkepzo Intezet (igaz. Doleschall, Frigyes, dr., az
orvostudomanyok kandidatusa) Verellato Osztalyanak (foorvos:
Vallo, Dezso, dr.) kozl.

(RH FACTORS

Rh immunization & incompatibility in preg. (Hun))
(PREGNANCY, blood in

Rh immunization & incompatibility (Hun))

PERKEDI, Janos, dr.; HORVATH, Endre, dr.; HOLLO, Tamas, dr.; VALLO, Dezso, dr.

Unusual amounts of a blood group substance in the blood serum of a newborn infant. Orv. hetil. 102 no. 44:2075-2076 29 0 '61.

1. Orvostovabbkepzo Intezet es Orszagos Verellato Szolgatalat Kozponti Kutato Intezet.

(BLOOD GROUPS) (INFANT NEWBORN blood)

VALLO, Dezso, dr.; PERKEDI, Janos, dr.

The effect of dissolved blood group substrates on the results of immunohematological examinations done after the delivery of the fetus. Magy. noorv. lap. 26 no.3:135-138 My '63.

1. Orvostovabbkepzo Intezet Verellato Osztalyanak kozlemenye,
(BLOOD GROUPS) · (EPISIOTOMY) (UMBILICAL CORD) (BLOOD)

VALLO, Deszo, dr.; SZASZ, Ilma, dr.; PERKEDI, Janos, dr.

Immunological pregnancy test with Choriogonine immune serum.
Orv. hetil. 104 no.48:2278-2280 1 D '63.

1. Orvostovabbkezdo Intezet, Verellato Osztaly.
(GONADOTROPINS, CHORIONIC) (PREGNANCY TESTS)
(IMMUNE SERUMS)

VALLO, D.; SAS, I.; PERKEDI, I.

Early diagnosis of pregnancy using the passive hemagglutination
method. Akush. i gin. no.1:24-28 '65. (MIRA 18:10)

1. Otdel perelivaniya krovi Instituta usovershenstvovaniya
vrachey, Budapesht.

VALLO, I.

Significance and method of the separation of city territories. p. 151.

EPITESUGYI SZEMLE. Budapest, Hungary. No. 5, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 1, Jan. 1960.

Uncl.

HUNGARY

VALLO, Jozsef, Dr; Hungarian People's Army, Health Service (Magyar Nep-hadsereg, Egeszsegügyi Szolgálat).

"The Prognostic Value of the Data obtained from Lymphatic Node Punctures in Leukosis."

Budapest, Orvosi Hetilap, Vol 104, No 18, 5 May 63, pages 839-842.

Abstract: [Author's Hungarian summary modified] Following a short discussion on the theory of extramedullary hemopoiesis, the author reports a case of chronic myelosis treated for three years. The blood picture and sternal puncture corresponded to that of chronic myelosis. At the same time, however, the puncture of the enlarged cervical lymph node showed a definite myeloblastic metaplasia. This finding tends to support the theory of the extramedullary origin of pathological myeloblasts. The final outflow of paramyeloblasts was delayed three months by the steroid, antibiotic and transfusion therapy. The significance of the technically simple lymphatic node puncture is stressed for the prognostic evaluation of the disease. 12 Western references.

1/1

VALIO, Jozsef, dr.; UDVARI, Pal, dr.; BEMNAT, Ivan, dr.

An oligosymptomatic case of adult Hand-Schueller-Christian syndrome. Orv. hetil. 106 no.22:1035-1037 30 My'65.

1. Nephadsereg Egeszegugyi Szolgatalat.

BERNAT, I.; VALLO, J.

Ozaenat: the causes of its familial occurrence. "Acta med. azad.
sci. Hung. 20 no.1:89-105 '64

1. Hungarian Army Medical Corps, Budapest.